

Postoperative adverse events not improved by the World Health Organization Surgical Safety Checklist at a Tertiary Care Center in Australia.

Elzerie de Jager¹, Chloe McKenna¹, Lynne Bartlett², Ronny Gunnarsson^{1,3,4}, Yik-Hong Ho^{5,6}

¹College of Medicine and Dentistry, James Cook University, Townsville, QLD 4814, Australia; ²College of Public Health, Medical & Veterinary Sciences, The Townsville Hospital, Townsville, QLD 4814, Australia; ³ Research and Development Unit, Primary Health Care and Dental Care Narhalsan, Southern Alvsborg County, Region Vastra Gotaland, Sweden; ⁴Department of Public Health and Community Medicine, Institute of Medicine, The Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden; ⁵Department of Surgery, College of Medicine and Dentistry, James Cook University, Townsville, QLD, Australia; ⁶International College of Surgeons, Chicago, IL, USA

Abstract

Background: The World Health Organization Surgical Safety Checklist has been widely implemented in an effort to decrease surgical adverse events. The effects of the checklist on postoperative outcomes have not previously been examined in Australia.

Methods: A retrospective review was conducted using administrative data over a 5-year time period to examine the effects of the implementation of the checklist on rates of postoperative outcomes in a sample of 6,028 surgical procedures at a tertiary care centre in Australia.

Results: The adjusted total complication, postoperative mortality and readmission to hospital rates did not significantly change between pre and post implementation [9.4% to 10.4% ($p=0.43$, OR 1.1 (0.89-1.3)), 0.93% to 0.85% ($p=0.70$, OR 0.90 (0.51-1.6)), 4.5% to 5.0% ($p=0.36$, OR 1.1 (0.89-1.3))]. The findings remained insignificant when a sub analysis was conducted on high risk surgical groups;; emergency cases and surgical procedures in the elderly. The data was separated into 6-month time periods for analysis of operative complication and mortality rates over time;; these were consistent (mean 10% SD 1.06, mean 0.9% SD 0.31, respectively).

Conclusion: Implementation of the WHO SSC was not associated with a statistically significant reduction in any operative outcomes examined over a 5-year time period in a regional tertiary care centre in Australia. This may be due to the checklist having a reduced effect in developed countries or due to the mandatory implementation of the checklist; leading to a tick and flick mentality surrounding its use. Further research is required to support the ongoing checklist use in Australia.